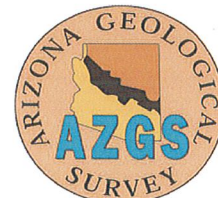
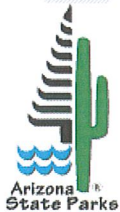
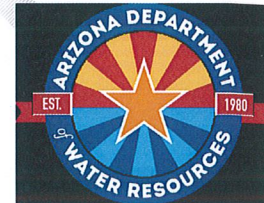
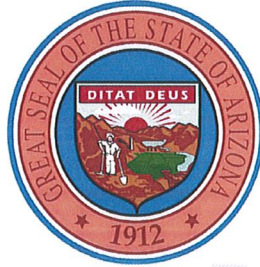


# State of Arizona

## Janice K. Brewer, Governor



## Interim Report of the Natural Resources Review Council

X January, 2014

## 1. Executive Summary

A vibrant Arizona economic and natural resources future requires an integrated natural resource management strategy and implementing mechanism. Influencing federal decisions or contemplated actions with the potential to impact our State's natural resources future is a critical component to that strategy. Consequently, State agency participation in federal processes must be consistent, proactive and comprehensive. On January 14, 2013, the Honorable Janice K. Brewer, Governor of Arizona, signed Executive Order 2013-12 establishing the Arizona Natural Resources Review Council (NRRC) (Attachment A) for the purpose of addressing this essential need.

The Executive Order's main organizing principle is contained within direction #1:

“... The Council shall develop land and natural resource management strategies for Arizona and coordinate with state natural resource agencies and their existing management plans.”

Council membership consists of the directors of the nine state agencies most directly involved with the State's natural resources challenges (Attachment B): The Arizona Department of Agriculture, the Arizona Department of Environmental Quality, The Arizona Department of Transportation, the Arizona Department of Water Resources, the Arizona Game and Fish Department, the Arizona Geological Survey, the Arizona State Forestry Division, the Arizona State Land Department, and the Arizona State Parks Department. Per the Executive Order, Larry D. Voyles, Director of the Arizona Game and Fish Department, was appointed chair of the Council.

At the Council's first meeting on February 25, 2013, it reviewed the Governor's charge to the Council, identified deliverables, and established four subcommittees to address them (Attachment C): The Geographic Information Systems (GIS) Subcommittee, the Planning Subcommittee, the Clearinghouse Subcommittee, and the Mitigation Banking Subcommittee. A fifth, Engagement and Partnering Subcommittee, was established as a result of the June 2, 2013, council meeting.

In the year since its establishment, the NRRC has held nine public meetings of the full Council. In addition, the subcommittees have held the meetings and telephonic conferences necessary to complete their work. Subject to further guidance by the Governor, the Council intends to continue meeting into 2014 in order to continue and complete its work.

Accordingly, the NRRC respectfully submits this interim report on the Council's work over the past 12 months in partial fulfillment of the Executive Order's direction that:

“The Council shall prepare a comprehensive report and plan to the Governor for long-term land and natural resource management. The report shall include and address multiple use and sustained yield approaches, public access issues, and sustainable economic development.”

The report includes recommendations by four of the five subcommittees: GIS, Planning, Clearinghouse, and Mitigation Banking. The Engagement and Partnering Subcommittee has

filed a report, but the Council deferred recommendations by this subcommittee since, in its estimation, Council-level analysis of the recommendations of the other subcommittees is a prerequisite for recommendations about engagement and partnering requirements.

## **2. Background**

The Federal system allows for states voluntarily to establish Single Points of Contact (SPOC) for the purpose of helping ensure review and coordination of federal actions affecting their jurisdictions. Some 19 states have established such bodies. Until 2001 Arizona was on a federal list of states with a SPOC, but that capability subsequently lapsed.

In 2011, Governor Brewer established several cornerstones of state reform to act as touchstones for the implementation of her administration's policy agenda. The NRRC is a practical outgrowth of one of those cornerstones, i.e., a renewed federalism:

“Renewed federalism is about the founding principle that America has a federal government, not a national government. And the federal government should be as restrained as possible, with most powers reserved for the states.”

Per the Governor's Executive Order, the NRRC's purpose is to provide (and, as appropriate, implement) recommendations for a comprehensive strategic approach to Arizona's long term, sustainable management of the State's natural resources based on the principles of multiple use, sustained yield, public access, and sustainable economic development. To that end, the NRRC has functioned as an interagency workgroup to develop and evaluate practical approaches for contending with the challenges to our State's ability to craft and manage a sustainable wildlife, land, water, and natural resources future for the benefit of current and future generations of Arizona citizens.

The NRRC's success depends on the development of proactive approaches that maintain the State's authorities with regard to federal policy and initiatives. While there are no obvious “silver bullets,” improved cross-agency coordination and collaboration with county and municipal governments and agencies, can significantly improve the timeliness and quality of Arizona's responses to proposed actions that will impact State resources and economic wellbeing. State and local plans, policies, and actions must be adequate to fully and cohesively inform and, if necessary, powerfully contest federal actions.

The desired outcome of the NRRC's work is a collaborative, uncompetitive relationship throughout Arizona on natural resource management issues. Until such time, the required outcome of the Council's work is to more effectively leverage data, information, and improved interagency process so as to position Arizona to effectively respond to federal decision, contemplated action, or potential encroachment on State authorities in a timely, consistent, coordinated, manner.

## **3. Reports and Recommendations of the NRRC**

**A. Overview:** From the Governor's Executive Order, the Council derived the requirements, generated a subcommittee structure, and assigned tasks to the subcommittees. From this, the subcommittees derived recommended deliverables necessary to accomplish the Governor's

objectives. These deliverables were reviewed by the Council and amended as necessary. This, the Council's interim report, synthesizes, by subcommittee, the current state of task accomplishment and the work remaining. The subcommittee's reports are attached, as indicated below.

## **B. Geographic Information Systems Subcommittee: (Report at Attachment D)**

**Executive Order Guidance:** "The Council shall develop a coordinated and centralized GIS database model that identifies current and future natural resource areas and management priorities."

**Goal:** The goal is to integrate GIS information to develop economic, land use, and natural resource conservation priorities, to:

- Improve our data and inventory of the State's natural, cultural, and geological resources.
- Inform federal planning efforts.
- Improve the availability of scientifically credible information to planners and developers for projecting siting and impact analysis.

**Implementing deliverable(s) Identified by the Subcommittee:**

- Development and Implementation of a prototype integrated GIS system.

**Subcommittee Recommendations(s):** While the contemplated GIS development is an immense undertaking, many Arizona natural resource agencies already have poured substantial resources over the past several years into developing this capability. As a consequence, Arizona is already reaping benefits from its GIS capabilities and will stand to significantly increase its return on that investment as a result of further development and expansion of this capacity that will result from work of the NRRC. The GIS Subcommittee proposes a phased approach to successfully leverage existing GIS capabilities and plan for an integrated, geospatial decision support system for Arizona's natural resource agencies. To assist in the short-term and long-term planning and budget proposal development, the GIS Subcommittee has already identified several existing and emerging resources (Attachment D, Appendix 10).

- **Recommendation 1- Phase One (Year 1)**

During Phase One, the GIS Subcommittee proposes using the existing Arizona Geospatial Clearinghouse (AZGEO) to meet the immediate geographic information needs of NRRC. The GIS Subcommittee will identify opportunities for improved and sustainable options for the future of AZGEO. Planning and budget proposals will be drafted to address future needs.

There is considerable synergy between the needs and requirements identified by GIS Subcommittee and Clearinghouse Subcommittee. Both committees are tasked with building a system that supports NRRC planning and mitigation needs. Therefore, an additional Phase One task of the GIS Subcommittee is to coordinate planning efforts with the Clearinghouse Subcommittee, and other NRRC subcommittees as needed. Planning and budget proposals will be drafted to address future collaboration needs.



- **Recommendation 2 - Phase Two (Year 2)**

During Phase Two, the GIS Subcommittee proposes implementing some of the AZGEO improvements identified during Phase One. The GIS Subcommittee also proposes finalizing sustainability plans and budgets for future NRRC GIS planning and mitigation requirements. This work is contingent upon acquiring the resources identified in budget proposals developed during Phase One.

- **Phase Three (Year 3 and beyond) – Recommendation 3**

The GIS Subcommittee proposes that in Phase Three the NRRC Subcommittees work together to deploy an integrated decision support system. This cross agency, coordinated decision support system will meet the planning and mitigation needs of the NRRC. The GIS component will be one module in the system. A general conceptual design incorporating these elements is shown in Attachment D, Figure 1.

**C. Planning Subcommittee: (Report at Attachment E)**

**Executive Order Guidance:** “The Council shall identify and prioritize legal, legislative and incentive-based needs that protect and maintain State interests related to wildlife, land, water, and other natural resources.”

**Goal:** The goal is to better position the state to be effective in the federal planning and decision-making processes, to:

- Ensure proposed federal projects are coordinated with the state and local governments.
- Ensure agencies will collectively evaluate state and local interests to inform proposed federal actions.
- Develop priorities and recommendations to challenge federal decision-makers to consider state and local alternatives.

**Implementing deliverable(s) Identified by the Subcommittee:**

- Completion of NRRC obligations under the County Comprehensive Plan Study per HB2001.

**Subcommittee Recommendations(s):** The primary work effort of the Natural Resource Review Council (NRRC) Planning Subcommittee (PSC) has been the management of the Natural Resource Study Grant (Study Grant) to the counties. The purpose of this grant is to examine resource management planning of Arizona counties. All Arizona counties are required to have comprehensive plans under Arizona Revised Statute 11-804 with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the area of jurisdiction, pursuant to the present and future needs of the county. The current status of county plans is shown in Attachment D, Table 1. This Study Grant shall determine what resource management components exist in the county comprehensive plans and, at a minimum, whether the plans address the counties specific desired outcomes regarding federal land management. A study grant for the 2014 Grant Cycle was approved by the NRRC at its December 2, 2013, meeting and will be publicly announced in early 2014.

- **Recommendation 1**

That, prior to the final FY14 County Study Grant Report on May 30, 2014, the PSC will review any completed recommendations from the study for potential NRRC Council approval and action. This will provide the opportunity to address early developed recommendations where expediency could benefit accomplishing NRRC objectives.

- **Recommendation 2**

That SFY 2015 funding be requested to complete planning in the 8 counties not addressed in FY 2014 County Study Grant. Those counties are noted in Attachment D, Table 1.

- **Recommendation 3**

Recommend SFY2015 funding for one limited term FTE and/or natural resource consultant to inventory and review State agency natural resource plans for federal land management coordination and influence.

**D. Clearinghouse Subcommittee: (Report at Attachment F)**

**Executive Order Guidance:** “The Council shall identify and prioritize legal, legislative and incentive-based needs that protect and maintain State interests related to wildlife, land, water, and other natural resources.”

**Goal:** The goal is to better position the state to be effective in the federal planning and decision-making processes, to:

- Ensure proposed federal projects are coordinated with the state and local governments.
- Ensure agencies will collectively evaluate state and local interests to inform proposed federal actions.
- Develop priorities and recommendations to challenge federal decision-makers to consider state and local alternative.
- Making an automated, web-based tool making available, by “subscription,” to all Arizona governmental bodies (state, county, and municipal level), non-governmental organizations (NGOs), and interested individuals, the details of all known federal actions affecting Arizona jurisdictions and interests.

**Implementing deliverable(s) Identified by the Subcommittee:**

- Prepare draft Governor’s Executive Order and Proclamation establishing the Arizona SPOC within the Office of Strategic Planning and Budgeting (OSPB).
- Develop a prototype Federal Document Clearinghouse and Distribution System (Working Title -- Clearinghouse Tool)

**Subcommittee Recommendations(s):** The clearinghouse plan represents perhaps the most technically aggressive task taken on by the NRRC and the task with the most potential for putting Arizona quickly and comprehensively into the debate over Arizona’s natural resources future and is essential to an effective State SPOC. This in no way

belittles the immensity of the GIS task the NRRC has taken on, but incorporates Arizona's GIS capability which is, in several important respects, an already mature capability, when compared with the point from which development of the clearinghouse function is starting. That said, the Clearinghouse Subcommittee's very substantial report outlines a path to success in its recommendations:

- **Recommendation 1- Phase One (Year 1) -**

The Clearinghouse Subcommittee would identify existing resources that meet the operational needs and technical requirements of the clearinghouse. During this phase, the Clearinghouse Subcommittee would also work to identify resource gaps, develop solution and budget proposals to fill the gaps, and coordinate with other subcommittees to identify opportunities for integrating with their recommendations and capabilities. Clearinghouse Subcommittee will provide direction to the team that will develop and test prototypes.

The prototype would demonstrate how the functionality of NRDSS meets agency needs and requirements. The first step of developing the prototype is integrating AZGEO as the State GIS repository/clearinghouse, Western Regional Partnership's Regional Project Database as a digital SPOC, and documents from at least one NRRC agency's document management system (nominally ADEQ). This prototype is a proof-of-concept. Arizona would likely have the first all-digital SPOC in the nation, which also reduces the staff needs compared to what other states have to invest to maintain their SPOC's.

The idea is to assess what is required in aggregating data and document resources from three separate system endpoints (AZGEO as the FIS repository/clearinghouse, WRP as the federal information source, and ADEQ as the prototype state agency resource). The goal is to minimize the amount of work required of each agency. In other words, we'd literally be saying to the agencies "you do whatever you're doing and we'll write the wrapper."

For demonstration purposes, we can re-use existing infrastructure developed out of AZGS' USGIN projects. Prototype development would require some coordination between appropriate technical staff to get the right pieces of the puzzle to fit together.

- **Recommendation 2 - Phase Two (Year 2)**

The Clearinghouse Subcommittee would enhance available resources and develop new capabilities to fill gaps identified in Phase One. During Phase Two, the Clearinghouse subcommittee would also begin planning for the integration of infrastructure developed by other subcommittees. This development will be contingent on acquiring the resources identified in budget proposals developed during Phase One.

- **Recommendation 3 - Phase Three (Year 3 and beyond)**

The Clearinghouse Subcommittee efforts will be fully integrated with other subcommittee efforts. During Phase Three, the anticipated Decision Support System will include the NRRC GIS system, a Single Point of Contact for the State of Arizona (AZSPOC), Federal documents and data relevant to natural resource management,

and an online catalog of all State Agency documents useful to NRRC members for planning and mitigation purposes. Support would be provided to help NRRC agencies find technical and financial resources to convert their paper records into a digital content management system with Web services.

#### **E. Mitigation Banking Subcommittee: (Report at Attachment G)**

**Executive Order Guidance:** “The Council shall provide recommendations to the Governor on a statewide approach to Mitigation and Conservation Banking . . . to meet long-term natural resource conservation objectives while providing assurances for proposed actions before development occurs.”

**Goal:** The goal is to provide short and long-term assurances for both development and natural resource conservation, to:

- Streamline regulatory permitting processes where off-site project mitigation is necessary.
- Provide the fundamental tools necessary to enable project proponents to meet existing statutory and regulatory requirements.
- Operate under a consistent, transparent, and free-market enterprise.
- Minimize the long-term commitment of project proponents to long-term mitigation requirements while enabling the State to realize its conservation priorities.

#### **Implementing deliverable(s) Identified by the Subcommittee:**

- Provide recommendations on a statewide approach to Mitigation and Conservation Banking.

**Subcommittee Recommendations(s):** The subcommittee examined mitigation and conservation banking in other states and engaged in discussions with industry professionals as well as academics involved with successful mitigation and conservation banking projects. The subcommittee placed special emphasis on developing a strategy for including State Trust lands whose highest and best use is conservation and mitigation.

Arizona’s 9.2 million acres of remaining State Trust lands were granted to the state by the United States Congress for the benefit of several public institutions, the largest of which are the Common Schools, otherwise known as K-12 education. As a fiduciary, the State Land Department must manage Trust lands to generate the highest return for the beneficiaries. Arizona’s climate, development patterns, and constitutional and statutory requirements as well as the fiduciary responsibilities of the State Land Department make including State Trust land in mitigation and conservation banking efforts a challenge. The subcommittee has determined an approach that it believes would benefit the Trust and the environment while also furthering economic development throughout the state.

The Endangered Species Act of 1973 (ESA) presents many challenges for development throughout Arizona. Arizona currently has over 77 species that are listed as threatened or endangered and over 25 of these have designated critical habitat. In addition to those already listed as threatened or endangered many more are candidate species or subject to existing conservation agreements.

When a species becomes subject to the provisions of the ESA, the impacts to development are unavoidable. The presence of a species or its habitat will necessitate a process with the United States Fish and Wildlife service that can take many years to complete and will most certainly result in severe limitations on development. Given the large number of species already designated or under consideration, virtually every part of the State will be affected.

In addition to conservation requirements under the ESA, the Clean Water Act (CWA) requires mitigation resulting in additional limitations on development.

The acreage that will be required for mitigation and conservation will depend on what the State does now to address the ESA and CWA. With active engagement and forward planning, it is possible to protect economic development, 404 washes and biodiversity. Based on past actions and agreements involving 404 mitigation and habitat conservation, and depending upon the species and habitat, without local forward planning the state can expect that between 40% and 80% of Arizona's private and State Trust lands will be set aside for conservation.

Further planning and development of State management plans based on sound science and local information will include the need for mitigation and conservation banking opportunities to comply with the ESA and CWA mandates while allowing for responsible economic growth in Arizona.

The implementation of these recommendations is anticipated to be an ongoing process dependent on available resources and funding. The anticipated end result will be the inclusion of State Trust lands whose highest and best use is in mitigation and conservation banking efforts, which will generate revenues for the trust, enabling coordinated planning, multi-use of lands, and economic development throughout the entire state.

With those goals and observations in mind, the MBS developed the following recommendations:

- **Recommendation 1**  
Continue to explore the ability and mechanisms for the inclusion of State Trust lands in the AZGFD In Lieu Fee program and in the USFWS conservation banking and candidate conservation agreement programs or in similar mitigation and conservation programs.
- **Recommendation 2**  
Continue to engage the USFWS to determine their interest in establishing conservation banks and/or candidate conservation agreements on qualifying lands.
- **Recommendation 3**  
Explore existing inter-agency in-house capabilities, funding options through the state or available federal grants and private sources to conduct an inventory of ASLD lands to identify lands that are suitable for 404 mitigation credits and/or the

establishment of conservation banks or candidate conservation agreements. Use obtained funds to:

1. Conduct a review of existing literature and mapping to initially determine ASLD lands that may contain potential waters of the US and/or suitable habitat for ESA species.
2. Perform cursory ground truthing of these lands to inventory potential waters of the US and/or suitable ESA habitats.
3. If survey data is not available, conduct ESA species surveys using existing protocols to determine presence of ESA species.
4. Conduct vegetative community ground truthing surveys to verify classifications of habitats and habitat that may be suitable for ESA.
5. Continue to engage the USFWS and ACOE, relevant jurisdictions, lessees, potential lessees/purchasers, and adjoining landowners, core Arizona industrial land users, and the development community, to assess future needs for conservation and 404 mitigation, and to explore mechanisms for use of suitable Trust lands to meet these needs.

- **Recommendation 4**

Complete a mitigation banking demand analysis to examine long-term growth patterns within the state, the demand for land associated with this growth, the identification of the probable mitigation required under the CWA, and the potential for mitigation banking to satisfy these requirements.

#### **F. Partnering and Engagement Subcommittee: (Report at Attachment H)**

**Executive Order Guidance:** While the Executive Order does not specifically address the task developed for this subcommittee, the Council believes the intent of the Order clearly implies that engaging local governments and stakeholder groups to inform them about the NRRC's activities, the potential benefits of its work, and the opportunities to productively partner in the Council's efforts is an important, even critical, task. It is the assessment of the Council that the real work of this subcommittee lie ahead as the full implications of the work of the other four subcommittees is assessed. In the interim, the NRRC's member agencies are already actively engaged in communicating with a broad range of governmental bodies at the legislative, county, and municipal levels, as well as identifying stakeholder groups and organizations.

**Goal:** The goal is to inform and engage stakeholders in the development of a Natural Resource Conservation Vision that integrates Arizona's economic and conservation future. The attached report should be viewed as a preliminary effort to generate a public engagement tool designed to highlight the threats and challenges to Arizona's natural resource future. It represents one of a suite of public information tools that will be built over the course of the NRRC's work.



**Implementing deliverable(s) Identified by the Subcommittee:**

- Develop presentation for public information and stakeholder engagement on the NRRC.
- As/if directed by the NRRC, develop a presentation to the Governor on the Final Comprehensive NRRC Report

**Subcommittee Recommendations(s):** Pending Council assessment of the work conducted by the other subcommittees.

4. **Conclusions and Way Ahead:** The NRRC's work will continue into 2014 as it completes the Governor's charge in the original establishing Executive Order. Beyond completion of a final comprehensive report, work to turn many of the recommendations into reality is already underway. Work on others will most appropriately proceed when this report has been fully assessed and assimilated.

**Respectfully Submitted:**

**DATE:**

---

**Larry D. Voyles, Chairman  
Director  
Arizona Game and Fish Department**

**DATE:**

---

**M. Lee Allison, Member  
Director and State Geologist  
Arizona Geological Survey**

**DATE:**

---

**Henry R. Darwin, Member  
Director  
Arizona Department of Water Quality**

**DATE:**

---

**Sandy Fabritz-Whitney, Member  
Director  
Arizona Department of Water Resources**

**DATE:**

---

**John S. Halikowski, Member  
Director  
Arizona Department of Transportation**

**DATE:**

---

**Vanessa P. Hickman, Member  
State Land Commissioner  
Arizona State Land Department**

**DATE:**

---

**Scott Hunt, Member  
State Forester  
Arizona State Forestry Division**

**DATE:**

---

**Bryan Martyn, Member  
Director  
Arizona State Parks Department**

**DATE:**

---

**Jack Peterson, Member  
Interim Director  
Arizona Department of Agriculture**

# **Attachment A**

**Governor's Executive Order 2013-02:  
“Establishing the Arizona Natural  
Resources Review Council”**

## **Executive Order 2013-02**

### **Establishing the Arizona Natural Resources Review Council**

**WHEREAS**, the ability for state natural resource agencies to engage and impact federal land and resource management plans is paramount; and

**WHEREAS**, cross agency coordination is critical to a sound and timely response to actions on federal lands that will impact state resources and economies; and

**WHEREAS**, federal land and resource planning processes often do not consider the short and long-term needs of the State of Arizona and local governments; and

**WHEREAS**, political change at the federal level can impede the ability of state agencies to effectively engage the federal government and result in federal intrusion on state authorities; and

**WHEREAS**, federal land and resource management decisions are being driven by litigation processes that have resulted in diminished multiple-use and sustained-yield principles; and

**WHEREAS**, we must protect State interests related to wildlife, land, water and natural resources by actively engaging and countering federal encroachment on State authorities tasked with managing Arizona's natural resources.

**NOW, THEREFORE, I**, Janice K. Brewer, Governor of the State of Arizona, by virtue of the power vested in me by the Constitution and the laws of this State do hereby order and direct as follows:

1. The Arizona Natural Resources Review Council (hereafter Council) is established. The Council shall develop land and natural resource management strategies for Arizona and coordinate with state natural resource agencies and their existing management plans.
2. The Council shall consist of the following natural resource agency directors appointed by the Governor:
  - Arizona Game and Fish Department
  - Arizona State Land Department
  - Arizona Department of Environmental Quality
  - Arizona Department of Water Resources
  - Arizona State Forester
  - Arizona Geological Survey
  - Arizona State Parks Department
  - Arizona Department of Agriculture
3. The Governor shall designate the Chairperson.
4. The Council shall prepare a comprehensive report and plan to the Governor for long-term land and natural resource management. The report shall include and address multiple use and sustained yield approaches, public access issues and sustainable economic development.

5. The Council shall develop a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas.
6. The Council shall identify and prioritize legal, legislative and incentive-based needs that protect and maintain state interests related to wildlife, land, water and other natural resources.
7. The Council shall provide recommendations to the Governor on a statewide approach to mitigation and conservation banking that includes State government, local governments and the private sector in order to meet long-term natural resource conservation objectives.
8. The Chairperson may form an executive committee or other sub-committees as necessary.
9. The Council shall meet as needed to conduct its affairs.
10. This Executive Order shall take effect immediately upon signature.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

  
GOVERNOR

DONE at the Capitol in Phoenix, on this 14<sup>th</sup> day of January in the Year Two Thousand Thirteen and of the Independence of the United States of America the Two Hundred and Thirty-Seventh.

ATTEST:

  
SECRETARY OF STATE





# **Attachment B**

## **NRRC Membership**

## NRRC Membership

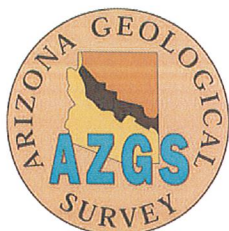
**Arizona Game & Fish Department (AGFD)**

**Larry D. Voyles, Director and NRRC Chairman**



**Arizona Geological Survey (AGS)**

**M. Lee Allison, Director and State Geologist**



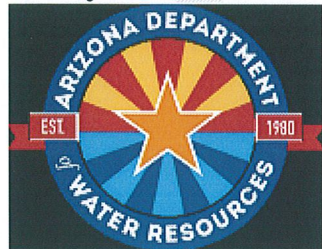
**Arizona Department of Environmental Quality (ADEQ)**

**Henry R. Darwin, Director**



**Arizona Department of Water Resources (ADWR)**

**Sandy Fabritz-Whitney, Director**



**Arizona Department of Transportation (ADOT)**

**John S. Halikowski, Director**



**Arizona State Land Department (ASLD)**

**Vanessa P. Hickman, State Land Commissioner**



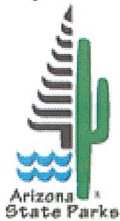
**Arizona State Forestry Division (ASFD)**

**Scott Hunt, State Forester**



**Arizona State Parks Department (ASPD)**

**Bryan Martyn, Director**



**Arizona Department of Agriculture (ADA)**

**Jack Peterson, Interim Director**



# **Attachment C**

## **NRRC Subcommittees**

# Subcommittee Rosters

As of November 19, 2013

## **GIS Subcommittee**

Lee Allison - Chair	Arizona Geological Survey
Evan Brom	Arizona State Land Department
Glen Buettner	Arizona State Forestry Division
Janel Day	Arizona Geological Survey
Joyce Francis	Arizona Game and Fish Department
Dene Gambrel	Arizona Geological Survey
Gene Trobia	Arizona State Land Department
Jeff Wilkerson	Arizona Department of Transportation

## **Planning Subcommittee**

Sandra Fabritz-Whitney – Co-Chair	Arizona Department of Water Resources
Scott Hunt – Co-Chair	Arizona State Forestry Division
Vanessa Hickman	Arizona State Land Department
Kim Patten	Arizona Geological Survey
Gerry Walker	Arizona Department of Water Resources
Sherri Zendri	Arizona Department of Environmental Quality

## **Clearinghouse Subcommittee**

Bob Broscheid – Chair	Arizona Game and Fish Department
Bill Boyd	Arizona State Land Department
Laura Canaca	Arizona Game and Fish Department
Jerry Payne	Arizona State Forestry Division
Michelle Moreno	Arizona Department of Water Resources
Sherri Zendri	Arizona Department of Environmental Quality

## **Mitigation Banking Subcommittee**

Kim Morey – Co-Chair	Arizona State Land Department
Tim Wade – Co-Chair	Arizona Game and Fish Department
Vanessa Hickman	Arizona State Land Department
Floyd Roehrich	Arizona Department of Transportation
Linda Taunt	Arizona Department of Environmental Quality

## **Engagement and Partnering Subcommittee**

Michael Conway – Chair	Arizona Geological Survey (Assumed duties from Bob Broscheid)
Bill Boyd	Arizona State Land Department
Carrie Dennett	Arizona State Forestry Division
Jim Paxon	Arizona Game and Fish Department
Kevin Kinsall	Natural Resources Advisor to the Honorable Janice K. Brewer, Governor of Arizona
Laura Oxley	Arizona Department of Health Services
Michelle Moreno	Arizona Department of Water Resources
Vanessa Hickman	Arizona State Land Department

# **Attachment**

## **D**

### **Report of the Geographic Information Systems (GIS) Subcommittee**



# Coordinated Geographic Information System (GIS) Plan for the Natural Resources Review Council

Natural Resources Review Council

GIS Subcommittee

November 6, 2013

M. Lee Allison, Arizona Geological Survey, Chair  
Glen Buettner, State Forestry  
Janel Day, Arizona Geological Survey  
Karen Fisher, Water Resources  
Joyce Francis, Game & Fish  
Victor Gass, Environmental Quality  
Ryan Johnson, State Land  
Gene Trobia, State Cartographer, State Land  
Jeffrey Wilkerson, Transportation

## Contents

Executive Summary .....	1
Establishing the Natural Resources Review Council .....	2
Natural Resources Review Council GIS Subcommittee .....	2
NRRC Clearinghouse Development, Planning and Mitigation Banking Subcommittees ....	<b>Error! Bookmark not defined.</b>
Clearinghouse Development Subcommittee .....	<b>Error! Bookmark not defined.</b>
Planning Subcommittee .....	<b>Error! Bookmark not defined.</b>
Mitigation Banking Subcommittee.....	<b>Error! Bookmark not defined.</b>
Natural Resources Review Council GIS Requirements .....	3
Discussion .....	4
Recommendations .....	5
Phase One (Year 1) Recommendation .....	5
Phase Two (Year 2) Recommendation .....	5
Phase Three (Year 3 and beyond) Recommendations .....	6
Appendix 1: Executive Order 2013-02 .....	7
Appendix 2: NRRC GIS Subcommittee Scope of Work .....	9
Charge to Subcommittee: .....	9
Expanded Charge: .....	9
Proposed scope of work.....	9
GIS Subcommittee Requirements .....	10
Timeline .....	10
Resources .....	10
Subcommittee Members.....	10
Appendix 3: Acronyms .....	11
Appendix 4: Existing GIS Resources.....	12
GIS Coordinating Bodies .....	12
Arizona Geographic Information Council (AGIC).....	12
National States Geographic Information Council (NSGIC) .....	12
Existing Documents, Surveys, and Assessments .....	12
Arizona Geospatial Clearinghouse Implementation Plan (Draft) .....	13

AGIC Geospatial Data Sharing Guidelines (2013) .....	13
AGIC GIS Strategic Plan (2009) .....	13
AGIC Business Plan for the Statewide Geospatial Clearinghouse (2010).....	13
NSGIC Geospatial Maturity Assessment (ongoing) .....	13
Survey of States' GIS Clearinghouses .....	13
Geospatial Platform (Federal GIS Clearinghouse) .....	14
Western Regional Partnership .....	14

## Executive Summary

In January 2013, Governor Jan Brewer released Executive Order 2013-02, "Establishing the Arizona Natural Resources Review Council" (NRRC) to "develop land and natural resource management strategies for Arizona and coordinate with state natural resource agencies and their existing management plans." In response to the Executive Order the NRRC established four subcommittees: Geographic Information Systems (GIS), Planning, Clearinghouse Development, and Mitigation and Conservation Banking. Each subcommittee established an individual scope of work, which when combined, would help roadmap a set of processes and policies for meeting the goals of Governor Brewer's Executive Order.

This report provides the recommendations of the NRRC GIS Subcommittee to accomplish the following goal of the executive order:

"Develop a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas."

The NRRC GIS subcommittee proposes to focus on meeting the GIS data requirements of the NRRC for council members to discover and access GIS data and services for planning or mitigation. In order to accomplish this, the GIS Subcommittee proposes a multi-phase approach:

**Phase One (Year 1):** The GIS Subcommittee will identify and utilize existing State resources that meet the immediate geographic information requirements of the NRRC. During this phase, the GIS Subcommittee will also work to identify gaps in existing GIS resources, develop solution and budget proposals to fill the gaps, and coordinate with other subcommittees to identify opportunities for integrating GIS into their efforts.

**Phase Two (Year 2):** The GIS Subcommittee will enhance available resources and develop new capabilities to fill gaps identified in Phase One. During Phase Two, the GIS subcommittee will also begin planning for the integration of GIS capabilities with services and systems developed by the other subcommittees. This development will be contingent on acquiring the resources identified in budget proposals developed during Phase One.

**Phase Three (Years 3 and on):** The GIS Subcommittee efforts will be fully integrated with other subcommittee efforts. During Phase Three, GIS will be fully integrated into an anticipated NRRC Decision Support System that includes the NRRC GIS system, a Single Point of Contact for the State of Arizona (AZSPOC), and an online catalog of all State Agency documents useful to NRRC members for planning and mitigation purposes.



## Establishing the Natural Resources Review Council

Governor Jan Brewer's Executive Order 2013-02, "Establishing the Arizona Natural Resources Review Council" (NRRC) established the NRRC to "develop land and natural resource management strategies for Arizona and coordinate with state natural resource agencies and their existing management plans" (Appendix 1). Participants in the NRRC include:

- Arizona Game and Fish Department
- Arizona State Land Department
- Arizona Department of Environmental Quality
- Arizona Department of Water Resources
- Arizona State Forester
- Arizona Geological Survey
- Arizona State Parks Department
- Arizona Department of Agriculture

In response to the Executive Order the NRRC established four subcommittees: Geographic Information System (GIS), Planning, Clearinghouse Development, and Mitigation and Conservation Banking. Each subcommittee was charged with the development of a scope of work to accomplish the goals of the NRRC. This document is in response to the GIS Subcommittee's Scope of Work as presented to the NRRC in April of 2013, and modified in June of 2013 (Appendix 2).

## Natural Resources Review Council GIS Subcommittee

The Executive Order directed that:

"The Council [NRRC] shall develop a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas."

In response, the Council established a GIS Subcommittee at its first meeting to develop a plan for a coordinated GIS capability to support the NRRC Mission. The GIS Subcommittee interpreted "a coordinated and centralized Geographic Information System database model" to be a GIS data infrastructure model that would enable the NRRC members to carry out land and natural resource management priorities. The GIS Subcommittee proposes the GIS data infrastructure could easily integrate with infrastructure proposed by the other Subcommittees to support the priorities of the NRRC.

The NRRC Chair appointed Council member Lee Allison, AZGS, as Chair of the Subcommittee. Each NRRC member agency was invited to appoint a member to the Subcommittee. The GIS Subcommittee prepared a Scope of Work (Appendix B) that was presented to the Council at the April 2, 2013 NRRC meeting.

The GIS Subcommittee informed the Council at the June 3, 2013 meeting that to meet the NRRC requirements defined in the Executive Order and NRRC needs discussed at the Council meetings, the GIS system should be one component (or module) of an integrated approach across the NRRC members.

This integrated approach could be defined as a decision support system. This system would enable finding, evaluating, and accessing both documents and geospatial datasets that support NRRC decision making, and would implement the Arizona Single Point of Contact (AZSPOC) for NRRC members receiving and responding to federal actions and notifications.

Coordination between the GIS Subcommittee and other NRRC subcommittees is essential in the planning and development of a fully implemented decision support system. The need for coordination between subcommittees is defined in the following section.

The GIS Subcommittee proposes that each NRRC subcommittee define their needs and scope. Year 1 will identify and utilize existing resources as much as possible and propose resources required in Year 2 to better integrate separate subcommittee requirements. Year 2 will utilize provided resources to interface the modules developed in Year 1 into a coordinated federated system to meet the interim needs of the NRRC. Year 3 and beyond will coordinate the long-term approach and is intended to identify the requirements and resources needed to integrate GIS components into an integrated system.

## **Natural Resources Review Council GIS Requirements**

The GIS Subcommittee is responsible for developing “a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas.”

The basic requirement for the NRRC GIS database model is a coordinated online system with a data driven model that defines State Natural Resource priority areas where NRRC members can find and download GIS data needed to support management priorities for those areas. Specific requirements defined by the GIS Subcommittee include:

1. Build on and leverage existing capabilities and standards in NRRC agencies
2. Incorporate work done by AGIC and other State entities
3. Utilize and support AGIC as a long-term resource
4. Allow each agency to maintain their internal systems
5. Foster compatibility among State, Federal, and local data for NRRC tasks

These basic requirements have evolved as the Council and other Subcommittee needs and requirements were further defined. GIS is now seen as one component in an integrated, modular system. This integrated system would serve as a decision support system for finding and accessing data, both GIS and other types, along with documents and materials from both State and Federal agencies to facilitate and coordinate State agency review and response to Federal and other documents and planned actions. Such a system would include a clearinghouse that could serve as the Arizona Single Point of Contact



(AZSPOC) for Federal agencies to submit documents and other materials needed by NRRC and could notify appropriate State authorities of items in their jurisdiction.

When fully implemented, end users could search GIS files, data, and documents from agencies, using keywords and geographic (map-based) searches, have shared online workspaces, and access to software tools and 'apps' to visualize and analyze the collected data sets. It is envisioned that integrating the requirements of each subcommittee will establish a decision support system for natural resource management. This requires a catalog of relevant State agency natural resources that aggregates materials from different software, in different formats, and using different nomenclatures and standards. A user interface (web portal) supported by NRRC would provide a single entry point to find information across agencies. NRRC members expressed the desire to continue to be able to provide system access from their own agency portals, in order to facilitate data analyses using applications and software unique or customized for that agencies issues and needs.

## Completed Actions

From January 2013 to November 2013, the GIS Subcommittee completed the following actions:

1. Identified existing Arizona and Federal GIS resources
2. Researched other states state-wide GIS platforms and policies
3. Identified and located existing surveys and assessments
4. Queried other NRRC Subcommittees on their GIS and data integration needs
5. Identified other GIS and data resources we want to leverage or tap
6. Compiled current total spending on GIS software licenses for Arizona state agencies
7. Held three teleconferences
8. Participated in and reported at each of the NRRC meetings
9. Identified future action items that includes a three phased approach for integrated development of the geospatial decision support system

## Discussion

There are a myriad of challenges in meeting the information requirements of the Executive Order and the needs of the Council but this report focuses solely on the GIS component of the larger framework. Focusing solely on GIS, the following discussion points are offered:

- GIS data from both State and Federal agencies appear to all be essentially capable of being exposed as OGC-compliant Web services (ie, WFS, WMS, etc). The AGIC AZGEO repository and clearinghouse is capable of serving similar functions for NRRC and AGIC has ancillary policies for data sharing.
- The AZGEO clearinghouse could provide centralized GIS support for NRRC in the next year or two, and possibly longer if projects continue to utilize AZGEO for support. However, if AZGEO is utilized for the NRRC clearinghouse, there is a need to obtain long-term funding to maintain its operation. If AZGEO is not utilized for the NRRC GIS clearinghouse, a larger effort will need to be

taken on including application development, database development, and coordinating project management functions, as well as the funding required for developing an alternative.

- State agencies traditionally have been reluctant to share data because of concerns of the potential commercial use or possible ‘misuse’ of their data. Recent changes to Arizona Statutes have mitigated these concerns. As a result, State agencies can commit to making their geospatial data discoverable or depositing their data into AZGEO or providing links to their GIS services.
- State agencies have vast amounts of GIS data but they are in varying states of quality and usefulness within each agency. We cannot presume that existing State resources will all be available to NRRC.
- AGIC is currently developing the AZGEO Implementation Plan. It is a business plan that proposes and identifies the requirements and policies to establish AZGEO as a long term resource. Many members of the NRRC are members of AGIC. By incorporating the needs and requirements of the NRRC into the AZGEO Implementation Plan, AGIC could endorse a plan that would provide GIS resources necessary to meet the needs of the NRRC.

## Recommendations

The GIS Subcommittee proposes a phased approach to successfully leverage existing GIS capabilities and plan for an integrated, geospatial decision support system for Arizona’s natural resource agencies.

To assist in the short-term and long-term planning and budget proposal development, the GIS Subcommittee has already identified several existing and emerging resources (Appendix 10).

### Phase One (Year 1) Recommendation

During Phase One, the GIS Subcommittee proposes using the existing Arizona Geospatial Clearinghouse (AZGEO) to meet the immediate geographic information needs of NRRC. The GIS Subcommittee will identify opportunities for improved and sustainable options for the future of AZGEO. Planning and budget proposals will be drafted to address future needs.

There is considerable synergy between the needs and requirements identified by GIS Subcommittee and Clearinghouse Subcommittee. Both committees are tasked with building a system that supports NRRC planning and mitigation needs. Therefore, an additional Phase One task of the GIS Subcommittee is to coordinate planning efforts with the Clearinghouse Subcommittee, and other NRRC subcommittees as needed. Planning and budget proposals will be drafted to address future collaboration needs.

### Phase Two (Year 2) Recommendation

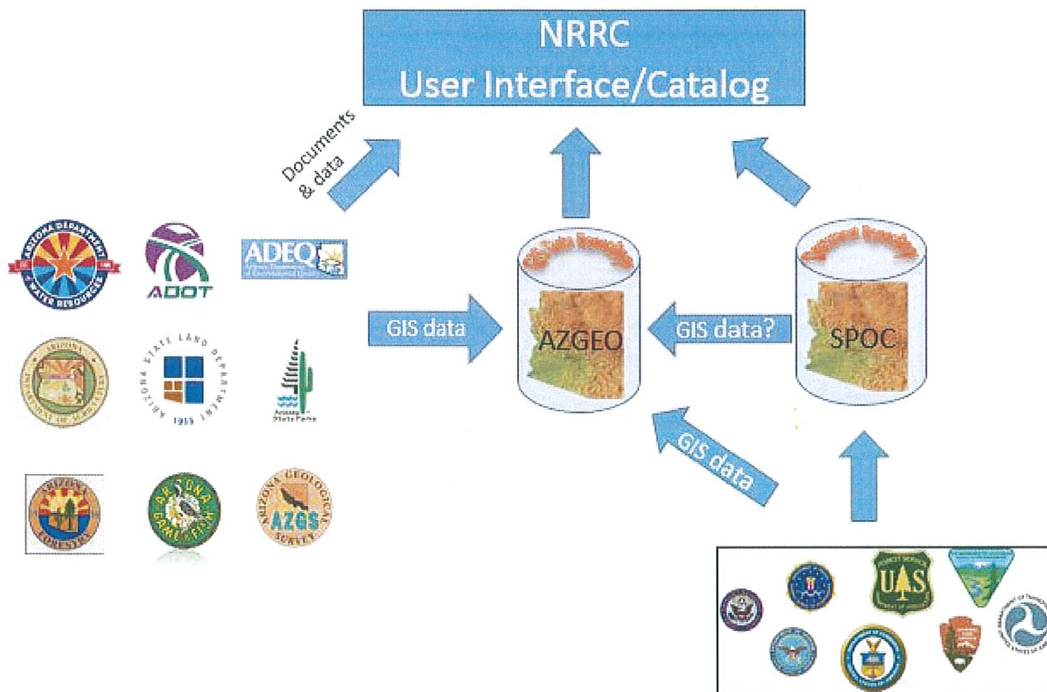
During Phase Two, the GIS Subcommittee proposes implementing some of the AZGEO improvements identified during Phase One. The GIS Subcommittee also proposes finalizing sustainability plans and budgets for future NRRC GIS planning and mitigation requirements. This work is contingent upon acquiring the resources identified in budget proposals developed during Phase One.



### Phase Three (Year 3 and beyond) Recommendation

The GIS Subcommittee proposes that in Phase Three the NRRC Subcommittees work together to deploy an integrated decision support system. This cross agency, coordinated decision support system will meet the planning and mitigation needs of the NRRC. The GIS component will be one module in the system. A general conceptual design incorporating these elements is shown in Figure 1.

## NRRC Decision Support System



**Figure 1.** GIS integration with NRRC Decision Support System

## Appendix 1: Executive Order 2013-02

### Executive Order 2013-02

#### Establishing the Arizona Natural Resources Review Council

**WHEREAS**, the ability for state natural resource agencies to engage and impact federal land and resource management plans is paramount; and

**WHEREAS**, cross agency coordination is critical to a sound and timely response to actions on federal lands that will impact state resources and economies; and

**WHEREAS**, federal land and resource planning processes often do not consider the short and long-term needs of the State of Arizona and local governments; and

**WHEREAS**, political change at the federal level can impede the ability of state agencies to effectively engage the federal government and result in federal intrusion on state authorities; and

**WHEREAS**, federal land and resource management decisions are being driven by litigation processes that have resulted in diminished multiple-use and sustained-yield principles; and

**WHEREAS**, we must protect State interests related to wildlife, land, water and natural resources by actively engaging and countering federal encroachment on State authorities tasked with managing Arizona's natural resources.

**NOW, THEREFORE, I**, Janice K. Brewer, Governor of the State of Arizona, by virtue of the power vested in me by the Constitution and the laws of this State do hereby order and direct as follows:

1. The Arizona Natural Resources Review Council (hereafter Council) is established. The Council shall develop land and natural resource management strategies for Arizona and coordinate with state natural resource agencies and their existing management plans.
2. The Council shall consist of the following natural resource agency directors appointed by the Governor:
  - Arizona Game and Fish Department
  - Arizona State Land Department
  - Arizona Department of Environmental Quality
  - Arizona Department of Water Resources
  - Arizona State Forester
  - Arizona Geological Survey
  - Arizona State Parks Department
  - Arizona Department of Agriculture
3. The Governor shall designate the Chairperson.
4. The Council shall prepare a comprehensive report and plan to the Governor for long-term land and natural resource management. The report shall include and address multiple use and sustained yield approaches, public access issues and sustainable economic development.

5. The Council shall develop a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas.
6. The Council shall identify and prioritize legal, legislative and incentive-based needs that protect and maintain state interests related to wildlife, land, water and other natural resources.
7. The Council shall provide recommendations to the Governor on a statewide approach to mitigation and conservation banking that includes State government, local governments and the private sector in order to meet long-term natural resource conservation objectives.
8. The Chairperson may form an executive committee or other sub-committees as necessary.
9. The Council shall meet as needed to conduct its affairs.
10. This Executive Order shall take effect immediately upon signature.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

  
GOVERNOR

DONE at the Capitol in Phoenix, on this 14<sup>th</sup> day of January in the Year Two Thousand Thirteen and of the Independence of the United States of America the Two Hundred and Thirty-Seventh.

ATTEST:

  
SECRETARY OF STATE





## Appendix 2: NRRC GIS Subcommittee Scope of Work

### Charge to Subcommittee:

"The Council [NRRC] shall develop a coordinated and centralized Geographic Information System database model that identifies current and future management priorities for designated land and natural resource areas." - Executive Order 2013-02

### Expanded Charge:

The system should provide for full data integration across the NRRC agencies and be scalable and transformable for other state agencies and able incorporate data from relevant federal agencies. June 3, 2013

The system should provide the framework for the NRRC Clearinghouse. June 25, 2013

### Proposed scope of work

1. Survey NRRC agencies to identify:
  - a. Data and services existing in each NRRC agency
  - b. Data and services required by each NRRC agency
  - c. Needs and requirements
2. Survey/Research other states state-wide GIS platforms and policies
3. Identify and locate existing surveys and assessments:
  - a. NSGIC (National States Geographic Information Council)
    - i. Geospatial Maturity Assessment ("a common, credible baseline assessment methodology to routinely and continuously monitor and validate statewide geospatial capabilities. Each state was asked to complete eighty three (83) detailed questions that characterize their geospatial programs.")
  - b. AGIC (Arizona Geographic Information Council)
    - i. Strategic and business planning documents
    - ii. Data sharing document
    - iii. Geospatial clearinghouse reports (existing approved documents and AZGEO Implementation Plan draft)
4. Identify State agencies software applications and technical expertise
5. Query other NRRC Subcommittees on their GIS and data integration needs
6. Identify other GIS and data resources we want to leverage or tap (e.g. Western Regional Partnership, White House Open Data Access Project, Data.gov, Geospatial Platform)
7. Identify best (and failed) practices
8. Compile current total spending on GIS software licenses for Arizona state agencies
9. Conduct gap analysis between existing resources and proposed system
10. Develop:
  - a. System Design and Architecture
  - b. State-Federal Information Clearinghouse
  - c. Scope of Work for Implementing the NRRC System

- d. Prepare budgets for implementation options
- e. Compile results into report with recommendations to NRRC

### GIS Subcommittee Requirements

1. Build on and leverage existing capabilities and standards currently within NRRC agencies
2. Incorporate work done by AGIC and other State entities
3. Utilize and support AGIC as a long-term resource
4. Allow each agency to maintain their internal systems
  - a. (ie, don't require any agency to convert databases, documents, or to change systems)
5. Foster compatibility among state, federal, and local data for NRRC tasks

### Timeline

Preliminary report to be presented to NRRC at the July meeting

Recommendations made to NRRC at August meeting with intent that agencies can factor them into FY14 budget proposals as warranted

### Resources

Rely on volunteer efforts by subcommittee members as time permits

### Subcommittee Members

1. Lee Allison, Arizona Geological Survey, Chair
2. Janel Day, Arizona Geological Survey
3. Gene Trobia, State Cartographer, State Land
4. Ryan Johnson, State Land
5. Glen Buettner, State Forestry
6. Joyce Francis, Arizona Game & Fish
7. Jeffrey Wilkerson, Transportation
8. Victor Gass, Environmental Quality
9. Karen Fisher, Water Resources

Submitted 4-2-13  
Revised 6-30-13, 8-18-13

### Appendix 3: Acronyms

ADEQ – Arizona Department of Environmental Quality  
ADOA – Arizona Department of Administration  
ADWR – Arizona Department of Water Resources  
AFIS – State of Arizona Financial System  
AGFD – Arizona Game and Fish Department  
AGIC – Arizona Geographic Information Council  
ALRIS – Arizona Land Resource Information System (part of Arizona State Land Department)  
ASLD – Arizona State Land Department  
ASP – Arizona State Parks  
ASP-SHPO – Arizona State Parks, State Historic Preservation Office  
AZDA – Arizona Department of Agriculture  
AZGEO – Arizona Geodata Portal (managed by the Arizona Geographic Information Council)  
AZGS – Arizona Geological Survey  
AZSF – Arizona State Forester  
AZSPOC – Arizona Single Point of Contact  
DOE – U.S. Department of Energy  
FGDC – Federal Geographic Data Committee  
FTE – Full Time Employee  
GIS – Geographic Information Systems  
GMA – National States Geographic Information Council Geospatial Maturity Assessment  
ISO – International Organization for Standardization  
IT – Information Technology  
NGDS – National Geothermal Data System  
NRRC – Natural Resources Review Council  
NSDI – National Spatial Data Infrastructure  
NSF – U.S. National Science Foundation  
NSGIC – National States Geographic Information Council  
OGC – Open Geospatial Consortium  
OMB – U.S. Office of Management & Budget  
OSTP – U.S. Office of Science and Technology Policy  
RDCC – Utah Resource Development Coordinating Council  
REST – Representational State Transfer  
SCO – State Cartographer’s Office (part of Arizona State Land Department)  
SOW – Scope of Work  
USGIN – U.S. Geoscience Information Network  
WFS – Web Feature Service  
WMS – Web Map Service  
WRP – Western Regional Partnership  
XML – Extensible Markup Language



## Appendix 4: Existing GIS Resources

### GIS Coordinating Bodies

The NRRC GIS subcommittee identified three coordinating bodies that provided framework and guidance information for the development of this report. These coordinating bodies are the Arizona Geographic Information Council, the National States Geographic Information Council and Western Regional Partnership.

#### Arizona Geographic Information Council (AGIC)

The Arizona Geographic Information Council (AGIC) is a primary GIS resource for the NRRC GIS Subcommittee, for GIS data and services, and policy.

AGIC has been coordinating GIS efforts in Arizona since 1989. AGIC was established by Executive Order 89-24 and now exists in legislation as a council (ARS 27-177). The mission of AGIC is “to coordinate the development and management of geographic information in Arizona. AGIC promotes the use of GIS and related technologies to address problems, develop plans, and manage the natural, economic and infrastructure resources of the state.”

AGIC has been incredibly successful in pursuing this mission. Several geospatial planning documents AGIC has produced are available for download on the AGIC website. Of these documents, NRRC GIS Subcommittee Report incorporates research and guidance from the following documents:

1. [2013 AGIC Geospatial Data Sharing Guidelines](#)
2. [2010 AGIC Strategic Plan](#)
3. [2010 Business Plan](#)

#### National States Geographic Information Council (NSGIC)

National States Geographic Information Council (NSGIC) is an association that might be considered the national equivalent of AGIC. The mission of NSGIC is “to promote statewide geospatial coordination activities in all states and to be an effective advocate for states in national geospatial policy and initiatives, thereby enabling the National Spatial Data Infrastructure (NSDI).”

NSGIC’s goal is to provide “a unified voice on geographic information and technology issues, advocates State interests, and supports its membership in their statewide initiatives. The Council actively promotes prudent geospatial information integration and systems development.”

NSGIC has also been incredibly successful in pursuing its mission. Several geospatial planning documents NSGIC has produced are available for download on the NSGIC website; the Maturity Assessment is discussed below.

### Existing Documents, Surveys, and Assessments

The NRRC GIS Subcommittee identified five strategic documents that provide the framework and guidance for the development of this report.

### Arizona Geospatial Clearinghouse (AZGEO) Implementation Plan (Draft)

The Arizona Geospatial Clearinghouse Implementation Plan document provides the structure for governance, functionality and technical specifications for the AZGEO. The AZGEO Implementation Plan draft is currently under review and contains information relevant to the NRRC GIS Subcommittee report. Requirements of the NRRC can be incorporated into AZGEO Implementation Plan to better address the needs and requirements of the NRRC.

### AGIC Geospatial Data Sharing Guidelines (2013)

The AGIC Geospatial Data Sharing Guidelines document serves as a “best practice guide for Arizona public agencies who engage in the sharing of geospatial data.” The document covers Arizona Revised Statutes as applicable to geospatial data sharing, the benefits of data sharing, data sharing roles, data sensitivity levels, the use of data disclaimers, metadata guidelines and guidelines for agencies to create their own data sharing policy. The document is currently posted for use on the AGIC website.

### AGIC GIS Strategic Plan (2009)

The AGIC GIS Strategic Plan summarizes the current GIS situation in Arizona; defines AGIC vision and goals; defines financial, organizational and technical requirements for meeting the goals; defines an implementation framework; describes the strategic planning methodology.

Strategic Goal #1 is to “facilitate the productive application and sharing of geospatial data and GIS and location based services to address the needs of Arizonans by establishing a Clearinghouse with statewide accessibility.” Strategic Goal #2 is to “achieve greater fiscal responsibility and efficiency through the wise governance of GIS services and geospatial data.”

### AGIC Business Plan for the Statewide Geospatial Clearinghouse (2010)

The AGIC Business Plan for the Statewide Geospatial Clearinghouse is focused on Strategic Goal #1 of the AGIC’s GIS Strategic Plan, to “facilitate the productive application and sharing of geospatial data and GIS and location-based services to address the needs of Arizonans by establishing a Clearinghouse with statewide accessibility.”

### NSGIC Geospatial Maturity Assessment (ongoing)

The Geospatial Maturity Assessment (GMA) is a survey conducted by NSGIC. The GMA offers “a common, credible baseline assessment methodology to routinely and continuously monitor and validate statewide geospatial capabilities. Each state was asked to complete eighty three (83) detailed questions that characterize their geospatial programs.” NSGIC is in the process of simplifying the GMA and plans to continue conduction the GMA. A revised version will be issued in 2013.

### Survey of States’ GIS Clearinghouses

The Arizona Geological Survey conducted a brief survey of the coordinated and centralized GIS data discovery and access systems for states that have data available online. The survey was conducted from the user’s perspective to evaluate the similarities and differences between state GIS data distribution systems and to identify states that have successfully implemented coordinated, centralized GIS data systems.



The brief survey concludes that most states have similar GIS data distribution system components. The biggest difference lies in the implementation of the system. From the user perspective, this translates to the user interface and user experience.

As expected, the ease of data access and use varied from state to state. Of the forty states that have GIS data online, five states implemented systems that had great strengths that set them apart from other systems.

From the user perspective, some states have well-coordinated, centralized GIS programs while others do not. North Dakota, for example, has a well-coordinated, centralized GIS system. All GIS data for all state agencies is only accessible through one location, the NDGIS Hub Data Portal.

The State of Utah has an easy-to-understand, aesthetically pleasing landing page for their initial data web access point. The State of Utah also distributes data in a variety of formats, enabling users to pick the data distribution method that works best for them. Utah employs a staff of about 20 to maintain this system.

New Mexico, Missouri, and West Virginia all have a user interface that is simple and intuitive, with no more than 3 clicks to data download. This translates to ease and speed in terms of how easy it is to find and access data

### **Geospatial Platform (Federal GIS Clearinghouse)**

The Geospatial Platform, a federal geospatial clearinghouse established by the Department of Interior at the direction of the Federal Geographic Data Committee Executive Council, is the official federal repository and clearinghouse for the federal government and offers promise as a central source of federal GIS materials. The Geospatial Platform is established as a GIS module/component of a broader Data.gov website.

### **Western Regional Partnership**

Arizona is one of five Western states partnering with 20+ federal agencies in the Western Regional Partnership to work collaboratively on land management and land use issues in the area. WRP is compiling an online GIS data repository that is expected to host 10,000 GIS layers available to WRP participants. In addition, the WRP Regional Project Database is a clearinghouse of documents and links that could ostensibly support the AZ SPOC.

# **Attachment E**

## **Report of the Planning Subcommittee**

Planning Subcommittee  
As of November 15, 2013 (As Amended December 29, 2013)

The primary work effort of the Natural Resource Review Council (NRRC) Planning Subcommittee (PSC) has been the management of the Natural Resource Study Grant (Study Grant) to the counties. The purpose of this grant is to examine resource management planning of Arizona counties. All Arizona counties are required to have comprehensive plans under Arizona Revised Statute 11-804 with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the area of jurisdiction, pursuant to the present and future needs of the county. This Study Grant shall determine what resource management components exist in the county comprehensive plans and at a minimum whether the plans address the counties specific desired outcomes regarding federal land management. The complete grant study objectives are attached in the Natural Resource Study Grant - Request for Application 2013.

The Study Grant is expected to be awarded by the first week of December, 2013, with substantial completion within 90 days and final completion by May 31, 2014. The PSC does not believe the Study Grant will have substantive reports available by the January 2014 NRRC report to the Governor, but based on the approved grant recipient in early December 2013, the PSC will know the number of counties that will have plan reviews. This will provide a basis to review the need and recommend future funding requests to address the remaining counties that are not included in this first study. Based on a current estimate, the PSC has suggested a request for future funding included in our recommendations below.

As products and recommendations are provided from this Study Grant before May 31, 2014, the PSC will review and provide these to the NRRC for further action.

State Agency Planning Efforts

Many State agencies have natural resource components to their statewide plans. Similar to the county natural resource study, it is recommended that the State of Arizona perform a review of State agency plans to determine if adequate language exists for federal land management coordination and influence. It is also important that State natural resource plans complement the County plans to assure effective state and local interaction with federal agencies.

PSC Recommendations:

Prior to the final FY14 County Study Grant Report on May 30, 2014, the PSC will review any completed recommendations from the study for potential NRRC Council approval and action.

Request SFY 2015 funding to complete any counties not addressed in FY 2014 County Study Grant. Currently the PSC estimates that 5 to 7 counties will be studied in this first grant.

Request SFY 2015 funding to inventory and review state agency plans for federal interaction and county plan synergy. Recommend one limited term FTE and/or natural resource consultant to perform the study.

Measures of Success:

NRRC County Study Grant Recipient(s) Approved by December 2, 2013.

Study Grant to provide initial recommendations within 60 to 90 days of grant agreement completion and a final report by May 14, 2014.

The recommended study products are defined as follows:

- Detailed report to the Arizona Natural Resources Review Council and the Arizona Legislature, to include, among others:
  - Detailed gap analysis between the desired outcomes of the selected counties' natural resource management plans and the study scope of management of threatened or endangered animal species; travel management rules and regulations; and, management of forest health;
  - Detailed template, if required based on the outcome of the study, for counties' natural resource management plans that meet the statutory requirements for effective interaction and influence with federal agencies;
  - Detailed gap analysis between the selected counties' natural resource management plans and the requirements for effective interaction and influence with federal agencies.
- Detailed recommendations, if required based on the outcome of the study, to the Arizona Legislature to give by statutes to local government authority and responsibility in certain programs areas, to establish the counties' Special Expertise required under federal regulation to qualify the counties as Cooperating Agencies (NEPA).
- Detailed recommendation for further action.

**Status of County Comprehensive Plans in Arizona**  
 April 26, 2013 (As Amended December 29, 2013)

<b>County</b>	<b>Approved/Amended</b>	<b>Expires</b>	<b>2014 Grantee</b>	<b>2015 Grant Target</b>
Apache	2004	2014	✓	
Cochise	2011	2021		✓
Coconino	2003	2013	✓	
Gila	2003	2013	✓	
Graham	2003	2013	✓	
Greenlee	2003	2013	✓	
La Paz	2010	2020		✓
Maricopa	2002	2012		✓
Mohave	2010	2020		✓
Navajo	2004	2014	✓	
Pima	2012	2022		✓
Pinal	2012	2022		✓
Santa Cruz	2004	2014		✓
Yavapai	2012	2022	✓	
Yuma	2010	2020		✓

**Table 1**